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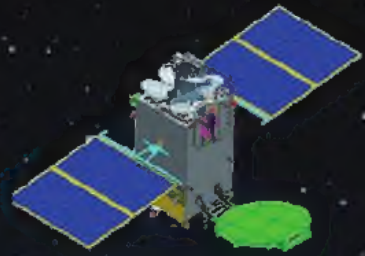


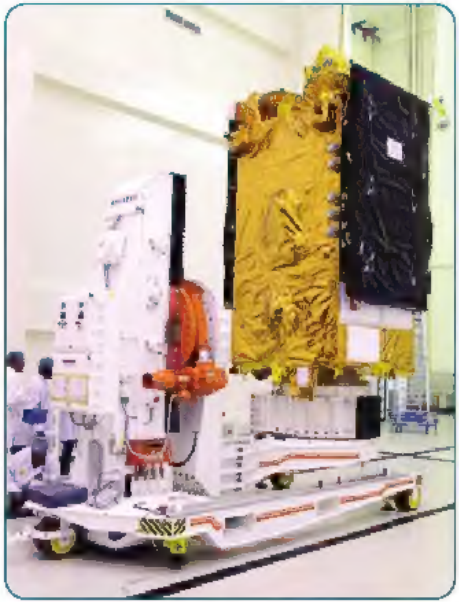
GSAT-7A

GSLV-F11/GSAT-7A

Indian Space Research Organisation

THE MISSION

- India's Geosynchronous Satellite Launch Vehicle (GSLV) – F11 will place 2250 kg GSAT-7A into a Geosynchronous Transfer Orbit
- GSLV-F11 will be launched from the Second Launch Pad (SLP) at Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota
- GSAT-7A is a geostationary communication satellite of India



TARGETED GEOSYNCHRONOUS TRANSFER ORBIT		
Perigee	:	170 ± 3 km
Apogee	:	33,190 to 40,600 km
Inclination	:	19.35 ± 0.1 degree

69th Launch Vehicle Mission from SDSC SHAR	**39th** Communication Satellite of ISRO	**13th** Flight of GSLV Mark II	**7th** Launch of 2018 from SDSC SHAR	**7th** Flight of GSLV Mark II with indigenous cryogenic upper stage

THE VEHICLE

Payload Fairing

Diameter: 3.4m

Third Stage

GS3 (CUS15)
Height : 9.894m
Diameter : 2.8m
Propellant: LH2 & LOX

First Stage

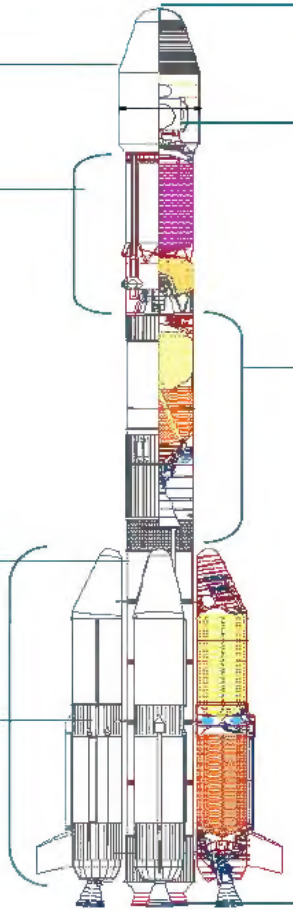
GS1 (S139 + 4 x L40H)

S139

Height : 20.176m
Diameter : 2.8m
Propellant: HTPB

Liquid strap-ons(4 x L40)

Height : 19.682m
Diameter : 2.1m
Propellant: UH25 & N_2O_4



GSAT-7A

Mass: 2250 kg

Second Stage

GS2 (GL40)
Height : 11.938m
Diameter : 2.8m
Propellant: UH25 & N_2O_4

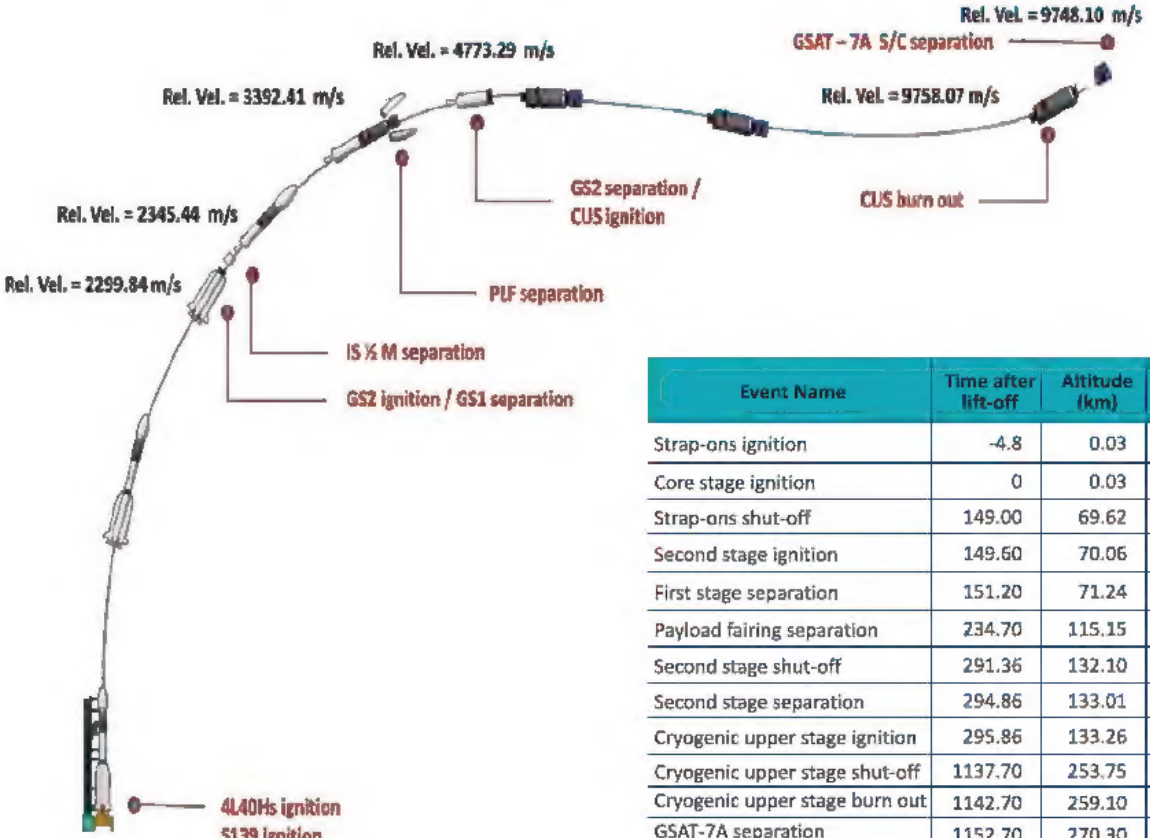
Height : 50.926 m

THE SATELLITE

- GSAT-7A is a geostationary satellite built to provide communication services in Ku-band over the Indian region
- GSAT-7A is configured using ISRO's 2000 kg satellite bus (I-2K bus)

SALIENT FEATURES		
Lift-off Mass	:	2250 Kg
Spacecraft Power	:	3.3 kW
Payload	:	Ku-band transponders
Mission Life	:	8 Years

GSLV-F11 Flight Sequence

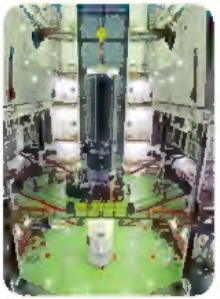


Event Name	Time after lift-off	Altitude (km)	Altitude (km)	Inertial Velocity (m/s)
Strap-ons ignition	-4.8	0.03	0	451.92
Core stage ignition	0	0.03	0	451.92
Strap-ons shut-off	149.00	69.62	2298.85	2722.31
Second stage ignition	149.60	70.06	2299.84	2723.57
First stage separation	151.20	71.24	2298.08	2722.56
Payload fairing separation	234.70	115.15	3392.41	3836.57
Second stage shut-off	291.36	132.10	4750.57	5197.15
Second stage separation	294.86	133.01	4773.29	5220.00
Cryogenic upper stage ignition	295.86	133.26	4772.81	5219.56
Cryogenic upper stage shut-off	1137.70	253.75	9758.52	10210.97
Cryogenic upper stage burn out	1142.70	259.10	9758.07	10210.73
GSAT-7A separation	1152.70	270.30	9748.10	10201.19

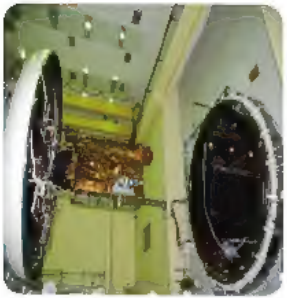
Glimpses of Launch Vehicle and Satellite Integration

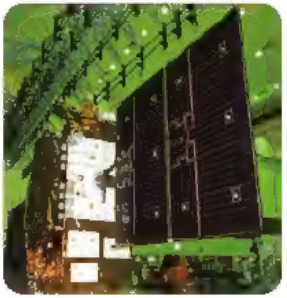
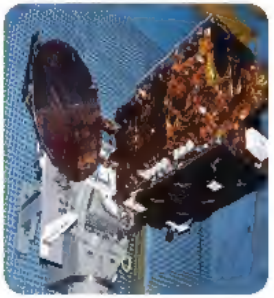
GSLV-F11



GSAT-7A

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